

July 2015

## Republic County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 13 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Republic County economy.<sup>1</sup> These 13 sectors have a total direct output of approximately \$188.2 million and support 972.1 jobs in Republic County. Running the model for all 13 sectors simultaneously produces the following results:

#### Agriculture Contribution in Republic County

Impact Type <sup>2</sup>	Employment	% of Total Employment	Total Value Added <sup>3</sup>	% of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	% of Gross Regional Product
Direct Effect	697.1	22%	\$61,005,640	35%	\$188,225,170	108%
Indirect Effect	158.7	5%	\$8,672,709	5%	\$18,435,942	11%
Induced Effect	116.3	4%	\$6,513,680	4%	\$12,400,746	7%
Total Effect	972.1	31%	\$76,92,029	44%	\$219,061,858	125%

As shown in the above table, agriculture, food, and food processing supports 972.1 jobs, or 31% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$219 million, roughly 125% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 13 agriculture, food, and food processing sectors is approximately \$76.9 million, or 44% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 44% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:  
[https://implan.com/index.php?option=com\\_content&view=category&id=19](https://implan.com/index.php?option=com_content&view=category&id=19)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

<sup>4</sup> GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

<sup>5</sup> Output = Intermediate Inputs + Value Added

In the top ten by employment, Grain Farming is the top employer in the agriculture industry with 267.5 employees. This table also shows the amount of jobs that are created by the agriculture industry in Republic County.

#### Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Grain farming .....	267.5	\$68,507,946
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	221.0	\$41,887,848
All other crop farming.....	118.1	\$10,959,863
Wholesale trade.....	42.1	\$7,838,237
Oilseed farming.....	32.6	\$51,663,371
Monetary authorities and depository credit intermediation .....	22.2	\$3,508,164
Business and professional associations .....	21.4	\$294,932
All other food manufacturing .....	19.3	\$6,261,518
Support activities for agriculture and forestry .....	18.5	\$896,014
Hospitals .....	16.9	\$1,882,541

The Grain Farming industry directly contributes approximately \$68.5 million to Republic County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

#### Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Grain farming .....	267.5	\$68,507,946
Oilseed farming .....	32.6	\$51,663,371
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	221.0	\$41,887,848
All other crop farming.....	118.1	\$10,959,863
Wholesale trade.....	42.1	\$7,838,237
All other food manufacturing .....	19.3	\$6,261,518
Farm machinery and equipment manufacturing.....	10.3	\$6,223,719
Monetary authorities and depository credit intermediation .....	22.2	\$3,508,164
Owner-occupied dwellings .....	0.0	\$2,931,889
Truck transportation.....	14.9	\$1,938,772

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Republic County's economy.

Sector Description	Employment	Output
Oilseed farming.....	32.6	\$51,663,371
Grain farming.....	267.5	\$68,507,946
Vegetable and melon farming.....	7.0	\$982,110
Greenhouse, nursery, and floriculture production.....	1.2	\$157,321
All other crop farming.....	118.1	\$10,959,863
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming.....	221.0	\$41,887,848
Poultry and egg production.....	0.7	\$265,360
Animal production, except cattle and poultry and eggs.....	3.7	\$277,537
Bread and bakery product, except frozen, manufacturing.....	2.9	\$278,148
All other food manufacturing.....	19.3	\$6,261,518
Farm machinery and equipment manufacturing.....	10.3	\$6,223,719
Veterinary services.....	9.3	\$591,712
Landscape and horticultural services.....	3.5	\$168,718
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All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.